

PERMIT NO.:

Date Rec'd.:

Amount Rec'd.:

Check No.:

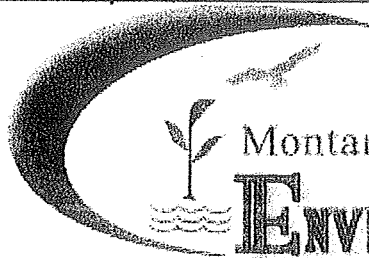
Rec'd By:

MTG010197

1/22/15

0

jpo



# Montana Department of ENVIRONMENTAL QUALITY

## WATER PROTECTION BUREAU

FORM  
NOI

### Notice of Intent (NOI) for Montana Pollution Discharge Elimination System Application for New and Existing Concentrated Animal Feeding Operations

The Application form is to be completed by the owner or operator of a Concentrated Animal Feeding Operation (CAFO) or Aquatic Animal Production Facility. Please read the attached instructions before completing this form. You must print or type legibly; forms that are not legible or are not complete will be returned. You must maintain a copy of the completed application form for your records.

#### Section A - Application Status (Check one):

- ☐ New No prior application submitted for this site.
- ☐ Resubmitted Permit Number: MTG \_\_\_\_\_
- ☒ Renewal Permit Number: MTG 010197
- ☐ Modification Permit Number: MTG \_\_\_\_\_

RECEIVED

JAN 22 2015

DEQWPB  
PERMITTING & COMPLIANCE DIV.

#### Section B - Facility or Site Information (See instruction sheet.):

Site Name Langan Ranch

Site Location Lenz Rd (3mE)

Nearest City or Town Glasgow County Valley

Latitude 48.132728 Longitude -106.550045

Date Facility began operation? 2005-2007

Is this facility or site located on Indian Lands? ☐ Yes ☒ No

#### Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name Lee Cornwall

Mailing Address Box 1031

City, State, and Zip Code Glasgow MT 59230

Phone Number 406-367-5246

Is the person listed above the owner? ☒ Yes ☐ No

Status of Applicant (Check one) ☐ Federal ☐ State ☒ Private ☐ Public ☐ Other (specify) \_\_\_\_\_

**Section D - Existing or Pending Permits, Certifications, or Approvals:** ☒ None

☐ MPDES \_\_\_\_\_ ☐ RCRA \_\_\_\_\_  
☐ PSD (Air Emissions) \_\_\_\_\_ ☐ Other \_\_\_\_\_  
☐ 404 Permit (dredge & fill) \_\_\_\_\_ ☐ Other \_\_\_\_\_

**Section E - Standard Industrial Classification (SIC) Codes:**

Provide at least one SIC code which best reflects the activity of project described in Section H.

Code	A. Primary	Code	B. Second
1	211	2	
Code	C. Third	Code	D. Fourth
3		3	

**Section F - Facility or Site Contact Person/Position:**

Name and Title, or Position Title Cody Cornwell  
Mailing Address Box 1031  
City, State, and Zip Code Glasgow MT 59230  
Phone Number 406-263-1589

**Section G - Receiving Surface Waters(s):**

Outfall/Discharge Locations: For each outfall, List latitude and longitude to the nearest second and the name of the receiving waters

Outfall Number	Latitude	Longitude	Receiving Surface Waters
001	42.132635	-106.544938	Milk River
002			
003			
004			
005			

Map: Attach a topographic map extending one mile beyond the property boundaries or the site activity identified in Section B depicting the facility or activity boundaries, major drainage patterns, and the receiving surface waters, stated above. Also identify the specific location of the production area, and land application area(s).

Is the receiving water on the 303(d) list for nutrients (nitrogen and/or phosphorus) ☐ Yes ☒ No

## Section H – Concentration Animal Feeding Operation Characteristics

### Waste Production, Storage and Disposal

Animal type	Number in Open Confinement	Number Housed Under Roof
<input type="checkbox"/> Mature Dairy Cows		
<input type="checkbox"/> Dairy Heifers		
<input type="checkbox"/> Veal Calves		
<input type="checkbox"/> Cattle (not dairy or veal)	3500	
<input type="checkbox"/> Swine (55 lbs or over)		
<input type="checkbox"/> Swine (55 lbs or under)		
<input type="checkbox"/> Horses		
<input type="checkbox"/> Sheep or Lambs		
<input type="checkbox"/> Turkeys		
<input type="checkbox"/> Chickens (broilers)		
<input type="checkbox"/> Chickens (layers)		
<input type="checkbox"/> Ducks		
<input type="checkbox"/> Other (Specify: _____)		
<input type="checkbox"/> Other (Specify: _____)		
<input type="checkbox"/> Other (Specify: _____)		

#### Manure, Litter and/or Wastewater Production and Use.

How much manure, litter, and process wastewater is generated annually by the facility?

Solid (tons): 981.75 Liquid/Slurry (gallons): NONE

If land applied, how many acres of land under control of the permit applicant are available to apply the manure, litter, or process wastewater generated from the facility? (Note: Do not include setback distances in available acreage)

1300 Acres

How much manure, litter, and process wastewater is transferred to other persons per year? (estimated) Solid

(tons): NONE Liquid/Slurry (gallons): NONE

Were the containment structures built after February 2006? Yes

☐ Do the waste containment structures have 10 feet of separation between the pond bottom and any bedrock formations? Yes

☐ Do the waste containment structures have 4 feet of separation from the pond bottom and any ground water? Y

☐ Were any of the waste containment structures built within 500 feet of any existing well? N

$$550 \times 17.5 = (9625 \times 1700 \times 100) / 2000 = 981.75 \text{ tons}$$

Type of Containment/Storage	Total Capacity	Units (gallons or tons)	Days of Storage
<input type="checkbox"/> Anaerobic Lagoon			
<input type="checkbox"/> Storage Pond #1	332,864	834.2	776,085.7
<input type="checkbox"/> Storage Pond #2	++		
<input type="checkbox"/> Storage Pond #3			
<input type="checkbox"/> Storage Pond #4			
<input type="checkbox"/> Storage Pond #5			
<input type="checkbox"/> Above Ground Storage Tank			
<input type="checkbox"/> Below Ground Storage Tank #1			
<input type="checkbox"/> Below Ground Storage Tank #2			
<input type="checkbox"/> Underfloor Pits			
<input type="checkbox"/> Roofed Storage Shed			
<input type="checkbox"/> Concrete Pad			
<input type="checkbox"/> Impervious Soil Pad			
<input type="checkbox"/> Other (Specify: _____)			
<input type="checkbox"/> Other (Specify: _____)			

### Physical Data for CAFO

#### Nutrient Management Plan

All Concentrated Animal Feeding Operations seeking permit coverage after July 31, 2007 are required to complete and implement a Nutrient Management (NMP). The NMP must be submitted to the Department using the form provided by the Department (Form NMP). Check the box below that applies and provide the required information. The NMP must be developed in accordance with ARM 17.30.1334 and implemented upon the effective date of permit coverage. (Check One)

☒ Does the facility have an NMP?

Date NMP was developed: 2012

Date NMP was last modified: 2013

☐ NMP has not been prepared; provide detailed explanation below

### Section I – Supplemental Information

## Section J - CERTIFICATION

### Permittee Information:

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

### All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)

Lee Cornwell Lee Cornwell

B. Title (Type or Print)

Partner

C. Phone No.

406-367-5246

D. Signature

Lee Cornwell

E. Date Signed

1-20-15

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form (NOI) and the applicable fee to:

Department of Environmental Quality  
Water Protection Bureau  
PO Box 200901  
Helena, MT 59620-0901  
(406) 444-3080

RECEIVED

JAN 22 2015

DEQ WPS  
PERMITTING & COMPLIANCE DIV.



A TRIMBLE COMPANY

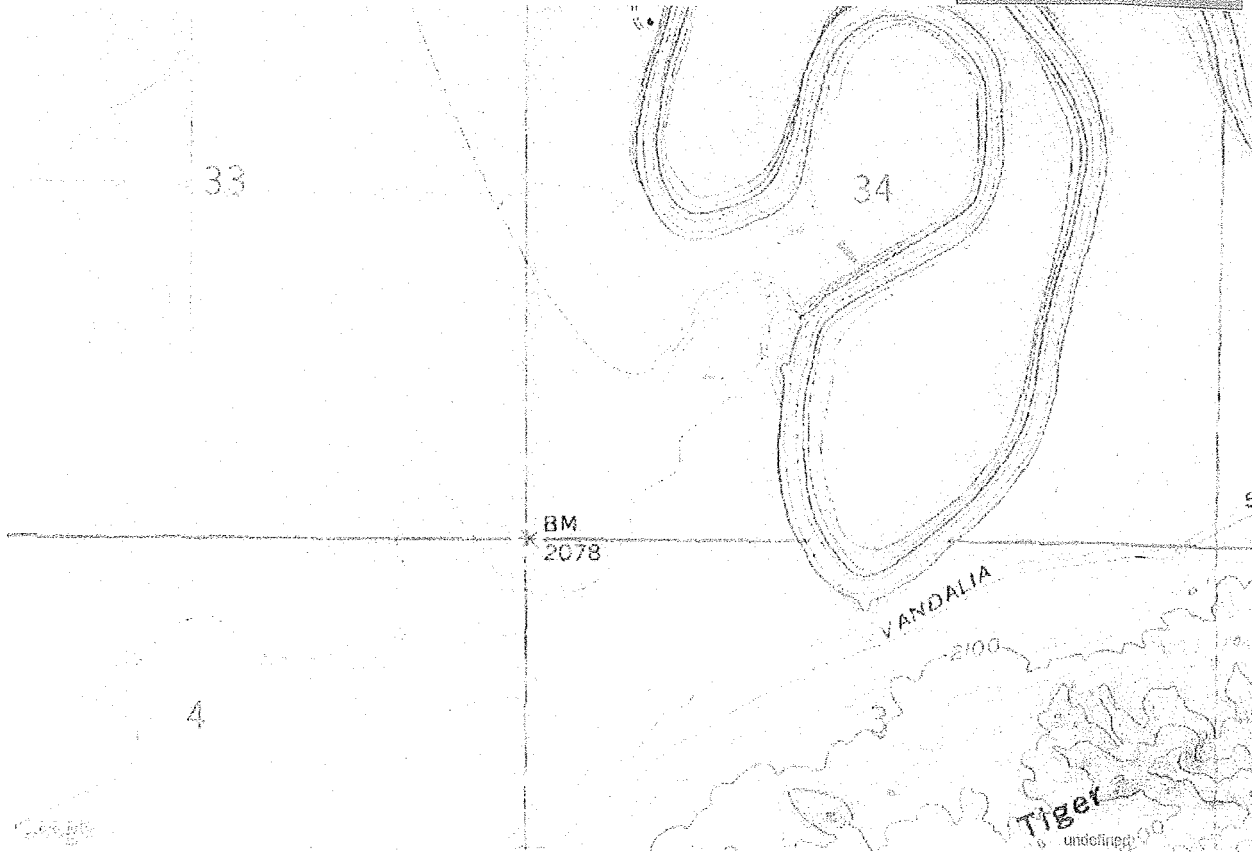
[Home](#) [Printed Maps](#) [Map Software](#) [Online Maps](#) [About Us](#)

[My Account](#) [Checkout](#)

Enter a location to view maps

☒ US ☐ Canada [Search for more maps](#)

[Order digital download here](#)



GPS Coordinate of Mouse: (DDMMSS) 48-07-34.6N, 106-31-58.4W | [Change Format](#)

Print from your computer: [Landscape](#) | [Portrait](#)

[Link to this map:](#)

Browse and view FREE US Geological Survey, US Forest Service, and NRCAN topo maps for the US and Canada.

MyTopo  
Like 5,069

MyTopo  
One South Broadway  
Billings, MT 59101

© 2000 - 2013 MyTopo, A Trimble Company

[About Us](#)  
[Partner Program](#)  
[Contact Us](#)  
[Privacy Policy](#)  
[Return Policy](#)

support@mytopo.com  
877.587.9004  
406.294.9411

## AGENCY USE ONLY

PERMIT NO.:

MTG 010197

Date Rec'd.:

1/22/15

Amount Rec'd.:

0

Check No.:

Rec'd By:

jps



Montana Department of  
**ENVIRONMENTAL QUALITY**  
WATER PROTECTION BUREAU

FORM  
NMP

## Nutrient Management Plan

**READ THIS BEFORE COMPLETING FORM:** Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For filling out Form NMP," found at the back of this form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your NOI-CAFO. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. The 2013 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or <http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp>

### Section A – NMP Status:

- ☐ New No prior NMP submitted for this site.
- ☐ Resubmitted Previous NMP found incomplete.
- ☐ Modification Change or update to existing NMP.
- ☒ New 2013 New 2013 version of NMP.

RECEIVED

JAN 22 2015

DEQ/WPB  
PERMITTING & COMPLIANCE DIV.

### Section B – Facility Information:

Facility Name Langer Ranch LLP

Facility Location T27N R40E S34

Nearest City or Town Glasgow County Valley

### Section C – Applicant (Owner/Operator Information):

Owner or Operator Name Lee Cornwell

Mailing Address P.O. Box 1031

City, State, and Zip code Glasgow MT 59230

Facility Phone Number 406-367-5246

Email Cornwellranch@remont.net

# Section D - NMP Minimum Elements:

## 1. Livestock Statistics

Animal Type and number of animals	# of Days on Site (per year)	Annual Manure Production (tons, cu. yds. or gal)
1. Stocker calves	150d	4725 - 15304
2. $450^{\#} - 650^{\#} / 2 = 550$ lbs		
3. - facility is		
4. designed for up		
5. to 5000 3500		
6. is max # past		
7. 3 yr.		
8.		

Method used for estimating annual manure production:

DEQ 9

## 2. Manure Handling

a. Describe Manure handling at the facility:

Manure is removed Aug-Nov. & Applied to field with spreader on unfrozen ground. It's stored in piles in the confinement area throughout year. All drainage goes directly to lagoon from stored piles.

b. Frequency of Manure Removal from confinement areas:

removed to field in fall. spread on fields incorporated or no till farming in spring.

c. Is this manure temporarily stored in any location other than the confinement area? ☐ Yes ☒ No  
If so then how and where?

d. Is manure stored on impervious surface? ☐ Yes ☒ No  
If yes, describe type and characteristics of this surface:



### 3. Waste Control Structures

Waste Control Structures (name/type)	Length (ft.)	Width (ft.)	Depth (ft.)	Volume (cubic ft. or gallons)	Number of days of storage
1. Holding pond	280	148.12	8ft	413504 cu ft	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

What is the 24 hr. 25 yr. storm event at this facility 3 in

Production area: 1360 acres. Type of lot (dirt or paved): dirt

Area contributing drainage form outside CAFO that enters confinement areas and waste storage, conveyance, or treatment structures: none acres.

What is the annual precipitation during the critical storage period 4-5 in

How much freeboard do the pond(s) have 3.5 ft

### 4. Disposal of Dead Animals.

Describe how dead animals are disposed of at this facility: removed from the pen within 24hr, buried in long trench starting at one end every few days or as needed. No animals stored above ground more than 4d. Trench approx 8ft deep.

## 5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

The entire Confinement area is surrounded with a dike to prevent from 100yr Floods of the milk river from entering. Rain water within confinement area is diverted into lagoon directly.

## 6. Prohibiting Animals and Wastes from Contact with State Waters

Describe how animals and wastes are prohibited from direct contact with state waters:

Cattle are contained in confinement within dike, all pen fences are maintained, 5' perimeter dike is also fenced. Water is provided by tanks within pens.

Describe how Chemicals and other contaminants are handled on-site:

No chemicals for crops are stored on site. All vaccines, antibiotics pour on are disposed of at city landfill using BMP, rinsed according to standards.

## 7. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural BMPS which will be used to control runoff of pollutants from facility's production area. Indicate the location of these measures. If BMPS are not installed include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces,, and waterways above and open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area; decreasing open lot surface area; repairing or adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.

Production Area BMP's Runoff water from the south is diverted within an open canal to fields to east, the remaining three sides are bordered with a dike designed to keep out the 100yr flood of the milk river. Tanks have flow controls to match water flow to the number of animals in each pen.

3. Fences to keep cattle away from Storage & diversion structure

1. diked to divert clean water runoff. 2. Holding Pond store runoff w/in confinement structure

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's land production area. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites;

never spray irrigating waste on to frozen ground: consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

#### Land Application BMP's

manure is spread on company owned property by manure spreader from Aug - Nov. to non frozen crop land.

Buffers ☒ Yes ☐ No

Conservation Tillage ☐ Yes ☐ No

Constructed Wetlands ☐ Yes ☐ No

Grass Filter ☐ Yes ☐ No

Infiltration Field ☐ Yes ☐ No

Residue Management ☐ Yes ☐ No

Set backs ☐ Yes ☐ No

Terrace ☒ Yes ☐ No

Other examples rotation of alfalfa, corn & other crops to reduce fertilizer use. Seasonal crop rotation based on rainfall & soil analysis.

#### 8. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part 2 of the permit.

Has a guidance document been developed for the facility? ☒ Yes ☐ No

NOI, NMP kept in records 2013

Certify the document address the following requirements:

Implementation of the NMP: ☒ Yes ☐ No

Facility operation and maintenance: ☒ Yes ☐ No

Record keeping and reporting ☒ Yes ☐ No

Sample collection and analysis: ☒ Yes ☐ No

Manure transfer ☐ Yes ☒ No

Provide name, date and location of most recent documentation:

NOI NMP 2013 on site  
2009

If your answer to any of the above question is no, provide explanation:

All manure is utilized on company owned property.

## Section E – Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

- ☒ Yes If yes, then the information requested in Section E must be provided.
- ☐ No If no, then provide an explanation of how animal waste at this facility are managed.

### Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"X 17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any downgradient surface waters.
- The location of any downgradient open tile line intake structures
- The location of any downgradient sinkholes
- The location of any downgradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

### Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibration procedures:

*Applied w/ spreader truck, trucks weighed spread pattern, measured on field.*

### Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining rates for manure, litter, and process wastewater

Manure Sample collection will occur according to ARM 17.30.1334

Other (describe)

### Soil Sampling and Analysis Procedures

Representative soil (composite) samples from the top 6 inches layer of soil for each field where manure will be applied must be analyzed for phosphorus content at least once every three years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater

Soil samples collection will occur according the methods in ARM 17.30.1334

Other (describe)

### Phosphorus Risk Assessment

The permittee shall assess the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or

may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

### Method Used

Indicate which method will be used to determine phosphorus application:

Method A – Representative Soil Sample

Method B – Phosphorus Index

### Method A – Representative Soil Sample

- Obtain one or more representative soil sample(s) from the field per 17.30.1334
- Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm)
- Using the results of the Olsen P test, determine application basis according to the Table below.

#### Soil Test

Olsen P Soil Test Results (ppm)	Application Basis
<25.0	Nitrogen Needs of Crop
25.1 - 100.0	Phosphorus Needs of Crop
100.0 – 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application allowed

### Method B – Phosphorus Index

- Complete a phosphorus Index according to the crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections in Appendix A, please refer to the method as described in Natural Resource Conservation Service (NRCS), Agronomy Technical Note MT-77 (rev3), January 2006.
- Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

#### Total Phosphorus

Total Phosphorus Index Value	Site Vulnerability to Phosphorus Loss
<11	Low
11-21	Medium
22-43	High
>43	Very High

- Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	Application Basis
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

The applicant has 2 ways in which to report how manure or process wastewater application rates can be reported to DEQ.

**1. Linear Approach.** Expresses rates of application as pounds of nitrogen and phosphorus. CAFOs selecting the linear approach to address rates of application must include in the NMP submitted to the permitting authority the following information for each crop, field, and year covered by the NMP, which will be used by the permitting authority to establish site-specific permit terms:

- The maximum application rate (pounds/acre/year of nitrogen and phosphorus) from manure, litter, and process wastewater.
- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. [If a state does not have an N transport risk assessment, the NMP must document any basis for assuming that nitrogen will be fully used by crops.] The CAFO must specify any conservation practices used in calculating the risk rating.
- The crops to be planted or any other uses of a field such as pasture or fallow fields.
- The realistic annual yield goal for each crop or use identified for each field.
- The nitrogen and phosphorus recommendations from in ARM 17.30.1334 (technical standard) for each crop or use identified for each field.
- Credits for all residual nitrogen in each field that will be plant-available.
- Consideration of multi-year phosphorus application. For any field where nutrients are applied at a rate based on the crop phosphorus requirement, the NMP must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement.
- All other additions of plant available nitrogen and phosphorus (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen).
- The form and source of manure, litter, and process wastewater to be land-applied.
- The timing and method of land application. The NMP also must include storage capacities needed to ensure adequate storage that accommodates the timing indicated.
- The methodology that will be used to account for the amount of nitrogen and phosphorus in the manure, litter, and wastewater to be applied.
- Any other factors necessary to determine the maximum application rate identified in accordance with this Linear Approach.

**2. Narrative Rate Approach.** Expresses a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied. CAFOs selecting the narrative rate approach to address rates of application must include in the NMP submitted to the permitting authority the following information for each crop, field, and year covered by the NMP, which will be used by the permitting authority to establish site-specific permit terms:

- The maximum amounts of nitrogen and phosphorus that will be derived from all sources of nutrients (pounds/acre for each crop and field).
- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. The CAFO must specify any conservation practices used in calculating the risk rating.
- The crops to be planted in each field or any other uses of a field such as pasture or fallow fields, including alternative crops if applicable. Any alternative crops included in the NMP must be listed by field, in addition to the crops identified in the planned crop rotation for that field.
- The realistic annual yield goal for each crop or use identified for each field for each year, including any alternative crops identified.
- The nitrogen and phosphorus recommendations from *[the permitting authority to specify acceptable sources]* for each crop or use identified for each field, including any alternative crops identified.
- The methodology (including formulas, sources of data, protocols for making determination, etc.) and actual data that will be used to account for: (1) the results of soil tests required by Parts II.A.4.b and III.A.3.g of this

permit, (2) credits for all nitrogen in the field that will be plant- available, (3) the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied, (4) consideration of multi-year phosphorus application (for any field where nutrients are applied at a rate based on the crop phosphorus requirement, the methodology must account for single-year nutrient applications that supply more than the crop's annual phosphorus requirement), (5) all other additions of plant available nitrogen and phosphorus to the field (i.e., from sources other than manure, litter, or process wastewater or credits for residual nitrogen), (6) timing and method of land application, and (7) volatilization of nitrogen and mineralization of organic nitrogen.

- Any other factors necessary to determine the amounts of nitrogen and phosphorus to be applied in accordance with the Narrative Rate Approach.

- NMPs using the Narrative Rate Approach must also include the following projections, which will not be used by the permitting authority in establishing site-specific permit terms:

- i. Planned crop rotations for each field for the period of permit coverage.
- ii. Projected amount of manure, litter, or process wastewater to be applied.
- iii. Projected credits for all nitrogen in the field that will be plant-available.
- iv. Consideration of multi-year phosphorus application.
- v. Accounting for other additions of plant-available nitrogen and phosphorus to the field.
- vi. The predicted form, source, and method of application of manure, litter, and process wastewater for each crop

- If the receiving water is on the 303(d) list for nutrients then the narrative rate approach must be used.

- a. For the Linear Approach the permittee will complete the Nutrient Budget Worksheet, below, for the next 5 years to which manure or process waste water is or may be applied. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

## Nutrient Budget Worksheet

Field identification: NE Pivot Year: 2012 Crop: Com

Expected Crop Yield:

Phosphorus index results or Phosphorus application from soil test:

Method of Application: manure spreader

When will application occur:

Nutrient Budget			Nitrogen-based Application	Phosphorus-based Application	Source of information
1		Crop Nutrient Needs, lbs/acre	19.8 x 20 = 396	8.8 x 20 = 176	
2	(-)	Credits from previous legume crops, lbs/ac	40 (alfalfa)	—	
3	(-)	Residuals from past manure production lbs/acre	—	—	
4	(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	—	—	
5	(-)	Nutrients supplied in irrigation water, lbs/acre	—	—	
6		= Additional Nutrients Needed, lbs/acre	359	176 lbs/acre	
7		Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1000 gal (from manure test)	27	9.4	
8	(x)	Nutrient Availability factor, for Phosphorus based application use 1.0	.5	1	
9		= Available Nutrients in Manure, lbs/ton or lbs/1000 gal	13.5	9.4	
10		Additional Nutrients needed, lbs/acre (calculated above)	359	176	
11	(/)	Available Nutrients in Manure, lbs/ton or lbs/1000 gal (calculated above)	13.5	9.4	
12		= Manure Application Rate, tons/acre or 1000 gal/acre	26.6	18.7	

Comments:



## Section F - CERTIFICATION

**Permittee Information:** This form must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

### All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

A. Name (Type or Print)

Lee Cornwell Langer Ranch

B. Title (Type or Print)

Partner

C. Phone No.

406-367-5246

D. Signature

Lee Cornwell

E. Date Signed

1-20-15

The Department will not process this form until all of the requested information is supplied, and the appropriate fees are paid. Return this form and the applicable fee to:

Department of Environmental Quality  
Water Protection Bureau  
PO Box 200901  
Helena, MT 59620-0901  
(406) 444-3080

RECEIVED

JAN 22 2015

DEQ/WPB  
PERMITTING & COMPLIANCE DIV.

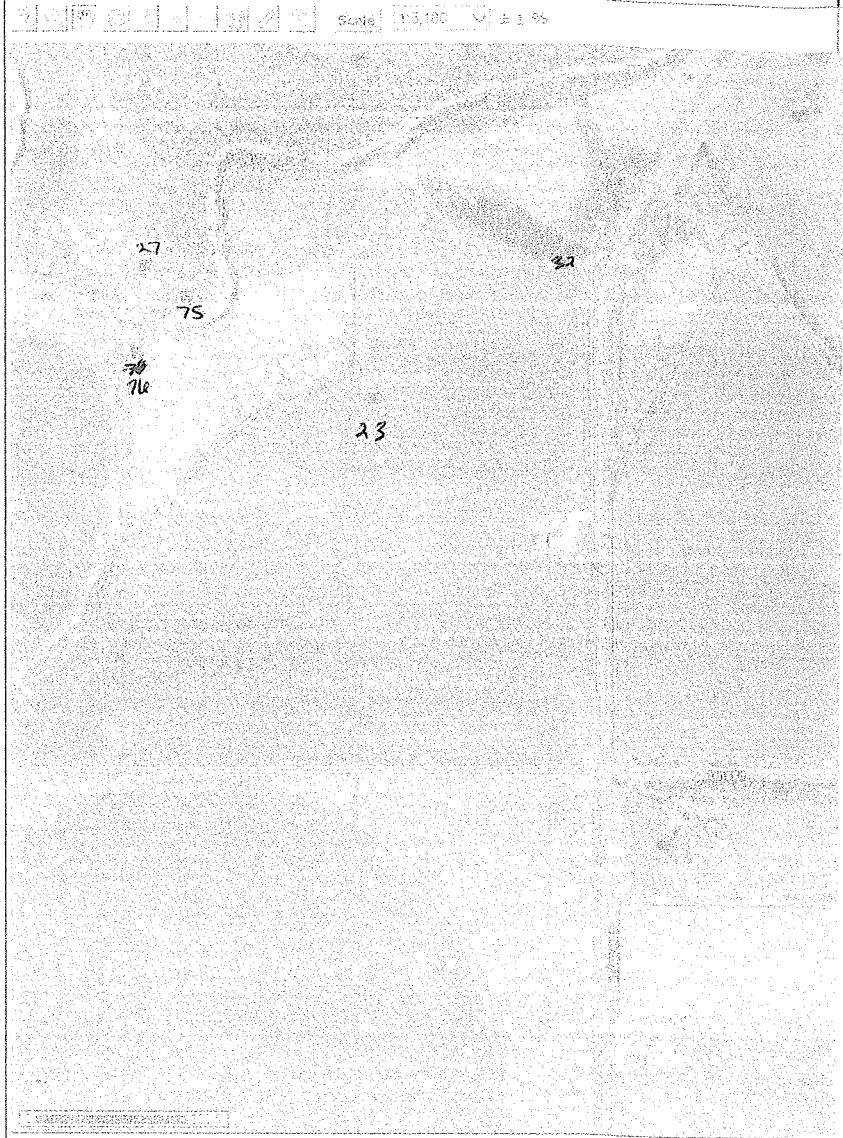
Search

Map Unit Legend

Valley County, Montana (MT105)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
23	Harlem clay	69.7	91.7%
27	Havre-Harlem silty clays	0.3	0.4%
32	Lallie silty clay	0.2	0.3%
75	Ustic Torrfluvents, gently sloping	5.1	6.7%
76	Vaeda silty clay	0.7	0.9%
<b>Totals for Area of Interest</b>		<b>76.0</b>	<b>100.0%</b>

Soil Map



[Area of Interest \(AOI\)](#)

[Soil Map](#)

[Soil Data Explorer](#)

[Download Soils Data](#)

[Shopping Cart \(Free\)](#)

[Printable Version](#) [Add to Shopping Cart](#) (?)

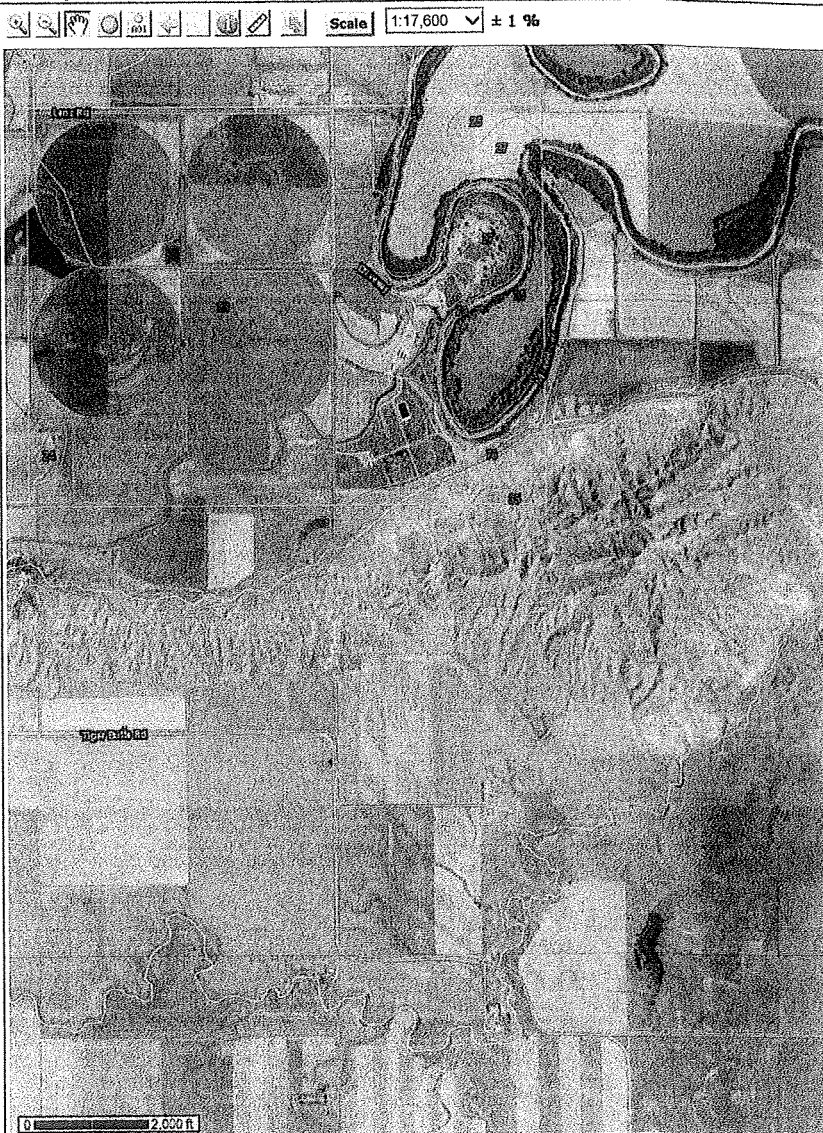
Search

Map Unit Legend

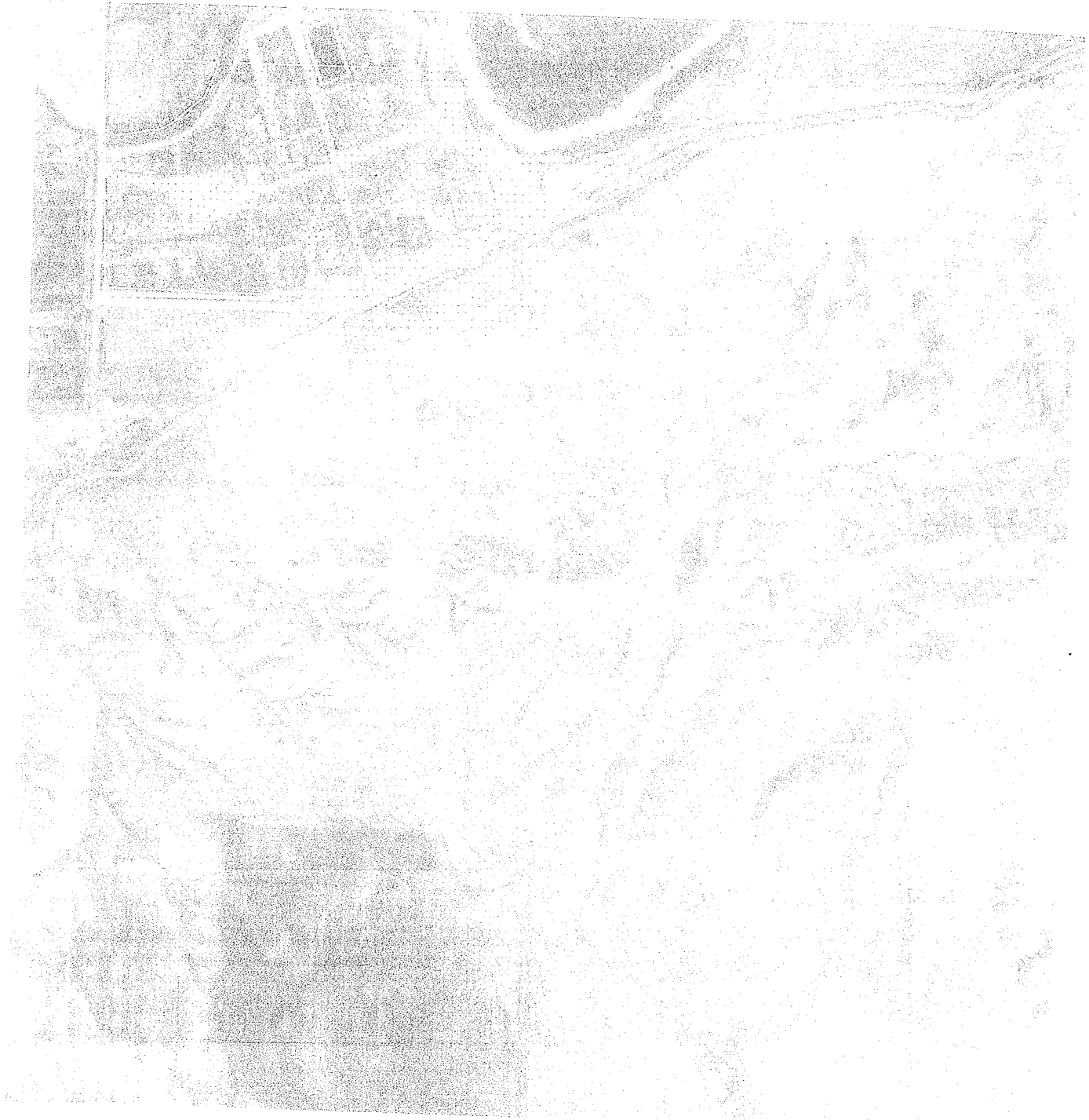
**Valley County, Montana (MT105)**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
23	Harlem clay	1,091.5	73.6%
24	Harlem clay, wet	10.4	0.7%
25	Havre silty clay loam	158.1	10.7%
26	Havre-Glendive complex	0.9	0.1%
27	Havre-Harlem silty clays	97.4	6.6%
35	Lisam-Dilts-Rock outcrop complex, 9 to 35 percent slopes	8.5	0.6%
76	Vaeda silty clay	83.0	5.6%
79	Water	33.2	2.2%
<b>Totals for Area of Interest</b>		<b>1,483.0</b>	<b>100.0%</b>

Soil Map



Ungen



Langen





United States  
Department of  
Agriculture

Yuma, County, Arizona

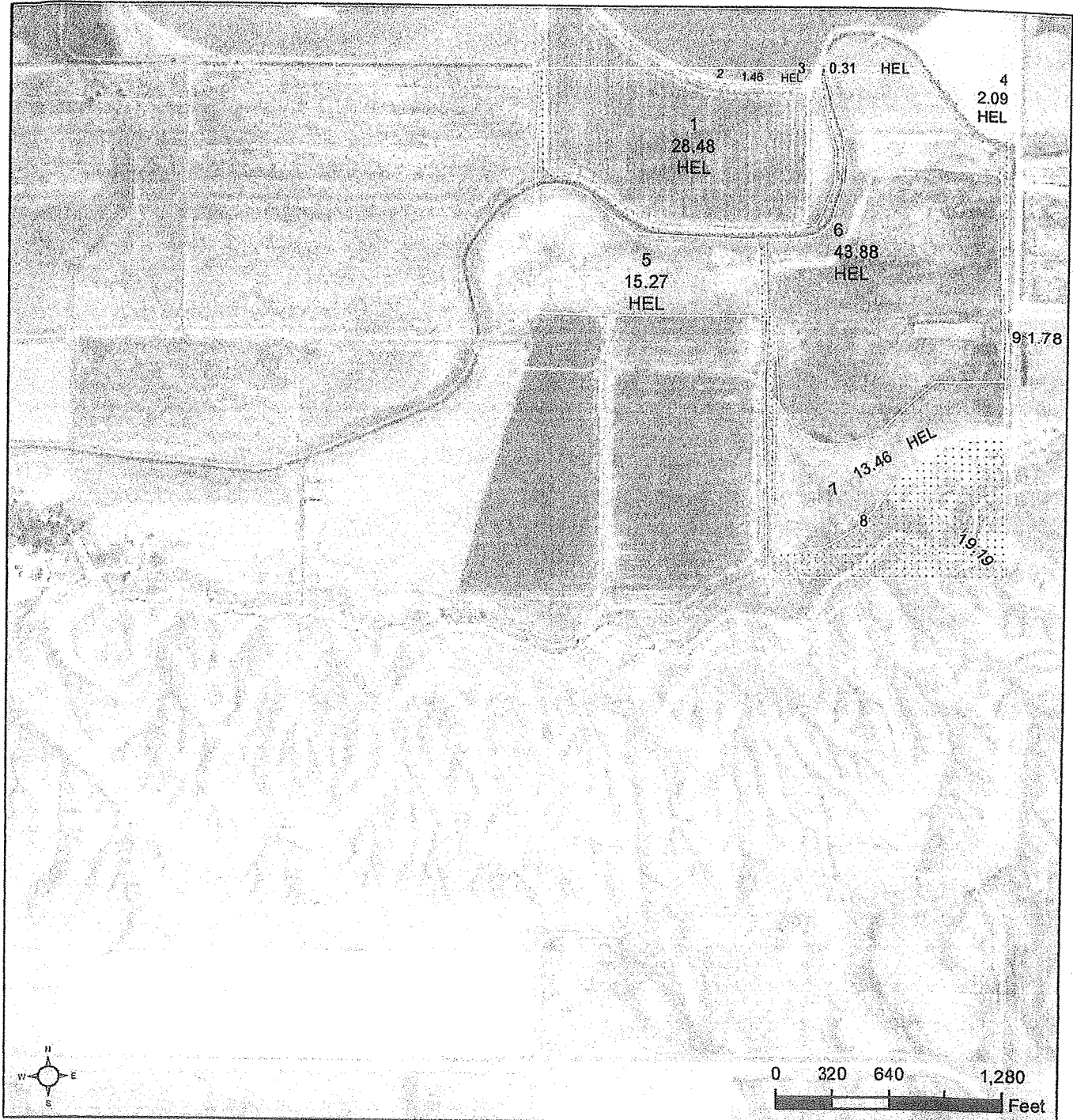






United States  
Department of  
Agriculture

## Valley County, Montana



### Common Land Unit

Cropland ..... Rangeland X\ Other Use

Conservation Reserve Program

### Wetland Determination Identifiers

- Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation Compliance Provisions

2014 Program Year

Map Created April 18, 2014

Farm 9656

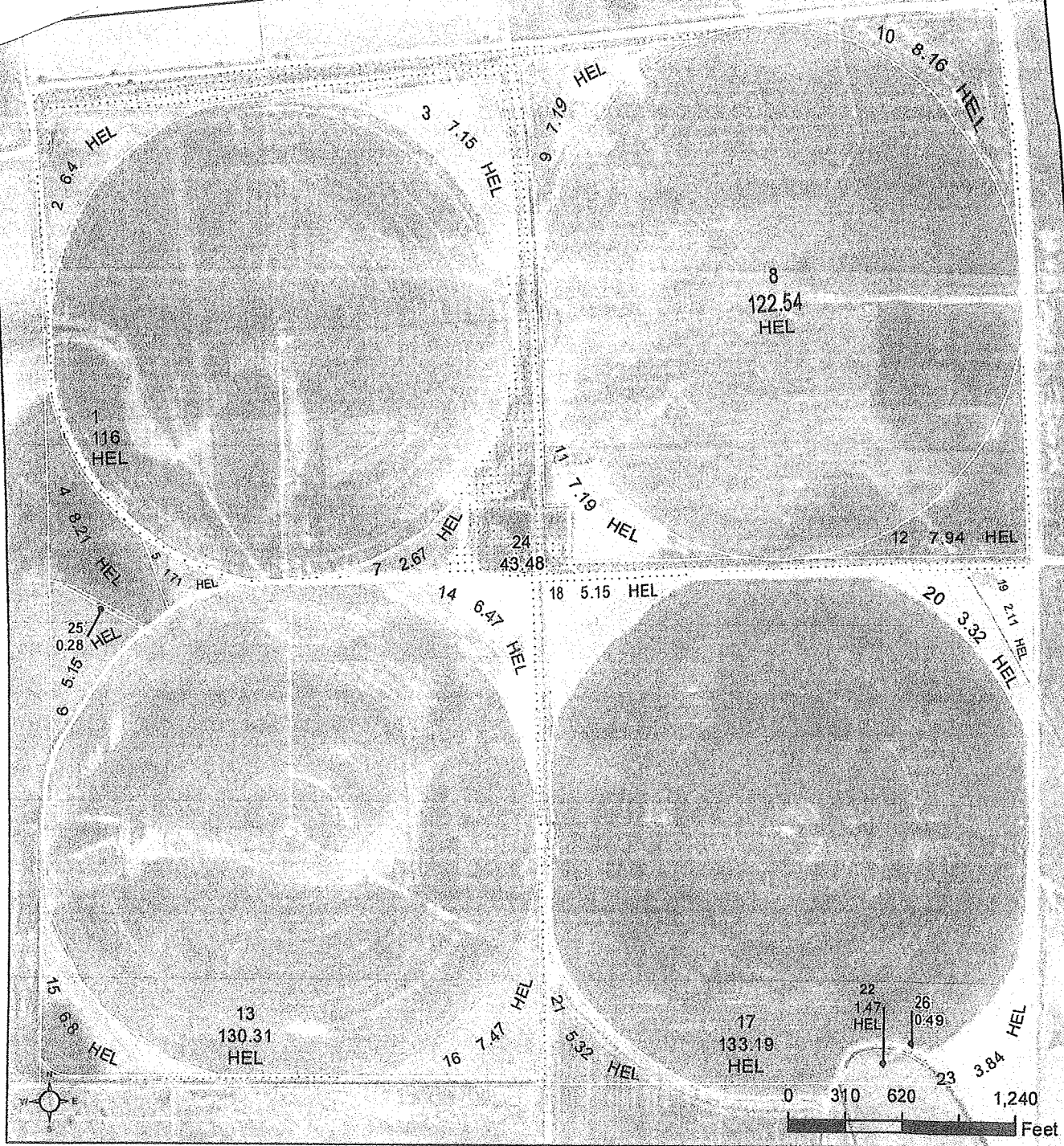
Tract 17676

4-27N-40E

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly from the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact boundaries and determinations or contact USDA Natural Resources Conservation Service (NRCS).

United States  
Department of  
Agriculture

# Valley County, Montana



## Common Land Unit

Cropland ..... Rangeland X Other Use

Conservation Reserve Program

## Wetland Determination Identifiers

- ② Restricted Use
- ▽ Limited Restrictions
- Exempt from Conservation Compliance Provisions

2014 Program Year

Map Created April 18, 2014

Farm 9656

Tract 17675

33-28N-40E

United States Department of Agriculture (USDA) Farm Service Agency (FSA) maps are for FSA Program administration only. This map does not represent a legal survey or reflect actual ownership; rather it depicts the information provided directly from the producer and/or National Agricultural Imagery Program (NAIP) imagery. The producer accepts the data 'as is' and assumes all risks associated with its use. USDA-FSA assumes no responsibility for actual or consequential damage incurred as a result of any user's reliance on this data outside FSA Programs. Wetland identifiers do not represent the size, shape, or specific determination of the area. Refer to your original determination (CPA-026 and attached maps) for exact boundaries and determinations or contact USDA Natural Resources Conservation Service (NRCS).



